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ACKERMAN, Senior District Judge:

This case presents one facet of a broader, multi-forum dispute between Metrologic Instruments, Inc. ("Metrologic") and Symbol Technologies, Inc. ("Symbol"), two close competitors in the design, development, manufacture, and sale of laser scanning bar code readers. Metrologic accuses Symbol of infringing three of its patents relating to automatically-operated laser bar code readers. With discovery completed, the Court must now determine the meanings of various disputed claims contained in the contested patents in accordance with the instruction of *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976-79 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). The Court held a hearing for this purpose on March 27, 2006. Subsequently, and with the consent of counsel, the Court submitted seven supplemental questions to the parties, and the parties filed their respective responses on April 24, 2006. The Court has carefully considered all of the parties' written and oral arguments. In the Opinion that follows, the Court sets forth its constructions of the patent claims in dispute.

I. Background**A. General Principles of the Relevant Technology**

The inventions described by the patents in suit are directed toward automatically-operated laser bar code readers, whose function is to scan and decode bar code symbols. Bar code symbols assume a variety of forms, but are most familiar to the lay public as the UPC bar code symbol commonly found on grocery items. These bar code symbols consist of a series of bars and spaces of contrasting darkness imprinted on a surface; the relative widths of the bars and spaces encode a numerical sequence. That numerical sequence, in turn, corresponds to a useful

piece of information, such as the identity of the grocery item on which the bar code symbol is imprinted. Thus, an operator equipped with a laser bar code reader may quickly retrieve detailed information encoded in the bar code symbol.

Laser bar code readers may be either hand held or fixed mounted. In some readers, the laser beam is off until a sensor detects the presence of an object in the vicinity of the reader. A signal from the sensor then causes the laser beam to turn on, or "initiate," automatically. This general process is known as "object detection" and is a common feature of "automatic" laser bar code readers. Object detection may take place before the laser bar code reader scans an object with the laser beam.

Most laser bar code readers today contain many of the same basic elements. A laser diode emits a laser beam that is directed to a mirror known generally as the "scanning mirror." The scanning mirror is moved by a motor, thereby projecting the beam in a pattern. When the laser beam crosses the bar code symbol, the laser light is reflected off the bar code symbol, with the white spaces reflecting more light than the black bars.

Some of the laser light reflected off of bar code symbols and other objects returns to the bar code reader, where it is detected by a component of the bar code reader known as a photoreceiver. A photoreceiver often consists of a photodiode, a device that converts light energy into an electrical signal. The electrical signal is an electronic representation of the object scanned by the laser beam. When the scanned object is a bar code symbol, the electrical signal represents the bar-and-space pattern.

A bar code reader must be able to differentiate between the laser light reflected by a bar code and the laser light reflected by other objects. The bar code reader accomplishes this task by

performing one or more tests on the electrical signal generated by the photoreceiver. By analyzing the electrical signal in this manner, the bar code reader is able to detect electrical signals representing the bar-and-space pattern of a bar code symbol. This process is known generally as "bar code detection."

Once the bar code reader has determined that the electrical signal represents a bar code, the bar code reader will proceed to "decode" the bar code in order to recover the encoded information (known as "character data"). Upon a successful decoding, the bar code reader "outputs" the character data to an interface where the operator of the bar code reader may readily retrieve the encoded information. An example of such an interface might be a cash register that rings up the scanned item.

B. History of Parties' Relationship

Metrologic and Symbol have been two of the leading innovators in the field of laser scanning bar code readers. In the early 1980s, Symbol invented the first hand-held laser scanning bar code reader, the triggered scanner, for which Symbol received several patents. The triggered scanner requires the operator to trigger the device's operation manually.

In the late 1980s and early 1990s, Symbol brought lawsuits against several of its competitors, including Metrologic, for infringement of its triggered scanner patents. Consequently, Metrologic removed its triggered hand-held scanner from the market and developed a "triggerless," or automatic, hand-held laser scanning bar code reader, which initiated laser scanning without the use of a manual trigger.

On January 1, 1996, Metrologic and Symbol signed a patent cross-license agreement. The agreement purported to define the parties' respective rights in various technologies

pertaining to bar code scanners. Although the parties' respective rights under this agreement comprise part of the instant dispute, this issue does not affect the Court's analysis here.

Metrologic now contends that two of Symbol's bar code reader products, the M2000 and LS1900 products, infringe three of Metrologic's patents under which Symbol does not hold licenses. Symbol insists that its products are non-infringing. The parties also dispute the meanings of numerous claims in the three patents in suit. In anticipation of a trial on the infringement issue, this Court has held a pretrial *Markman* hearing in order to ascertain the proper construction of the claims in dispute.

C. General Description of the Relevant Patents

1. The Parent Application of the Patents in Suit

Metrologic filed the first patent application (U.S. Patent App. No. 07/583,421, or the "'421 application") for an automatic laser scanning bar code reader on September 17, 1990. The application ultimately issued as U.S. Patent No. 5,260,553 on November 9, 1993. Metrologic subsequently obtained numerous additional patents, all based in part on the original '421 application. Three of these subsequent patents form the basis of the instant dispute.

All three patents in suit are either continuation¹ or continuation-in-part² patents originating from the same “parent” application, the ‘421 application. The ‘421 application suggests that the main technical obstacle for the automatic bar code reader was replacing the human operator, who controlled the hand-held reader by manually triggering the device’s operation, with a system controller capable of operating the reader in a diverse set of operating conditions. In the ‘421 application, Metrologic identified various features that it wished to incorporate in its bar code readers to accomplish this goal, such as allowing for both short- and long-range detection of bar code symbols located in the vicinity of the reader, and managing the power consumption of the reader in certain configurations. The patents in suit are representative of Metrologic’s efforts in addressing the shortcomings and drawbacks of the prior art.

¹ A continuation application is a second application for the same invention claimed in an earlier application (called the “parent” application) filed by the same inventor and containing the same disclosure as the parent application. If the continuation is filed before the parent application becomes abandoned or patented and makes a specific reference to the parent, the continuation is entitled to the benefit of the date the parent was filed. *See Manual of Patent Examining Procedure* § 201.07 (8th ed. 2005); *see also Applied Materials, Inc. v. Advanced Semiconductor Materials Am., Inc.*, 98 F.3d 1563, 1579 (Fed. Cir. 1996) (“Although there may be some variation in the scope of the claimed subject matter, a continuation application is based solely on the disclosure of a parent application.”); *Renishaw P.L.C. v. Marposs Societa’ Per Azioni*, 974 F. Supp. 1056, 1069 (E.D. Mich. 1997) (“Generally, a continuation application contains the exact same disclosure, specification, and figures of the original patent. The only thing that changes is the claims.”).

² A continuation-in-part application contains a substantial portion of the disclosure as contained in the parent application and is filed before the parent becomes abandoned or patented; however, a continuation-in-part application also includes new subject matter not disclosed in the parent application. The continuation-in-part application is entitled to the benefit of the parent application’s filing date to the extent that they contain common subject matter. *See Manual of Patent Examining Procedure* § 201.08 (8th ed. 2005); *see also Augustine Med., Inc. v. Gaymar Indus., Inc.*, 181 F.3d 1291, 1302 (Fed. Cir. 1999) (“A [continuation-in-part application] contains subject matter from a prior application and may also contain additional matter not disclosed in the prior application. . . . Subject matter that arises for the first time in the [continuation-in-part] application does not receive the benefit of the filing date of the parent application.”).

2. United States Patent 5,939,698

United States Patent No. 5,939,698 (the “‘698 patent”) originated from three continuation applications of the ‘421 application. The ‘698 patent describes an automatic laser bar code reader having both a hand-held and a stand-supported mode of operation. Of the claims in dispute, claim 1 is an independent claim³ and claim 2 depends from claim 1.

Claim 1 sets forth an automatic hand-held bar code reader with a support stand. The device in claim 1 has five major components, including (1) a housing; (2) a means for producing scan data that consists of a laser beam producing means, a scanning means, and a laser light detecting means; (3) a bar code presence detection means; (4) a symbol decoding means; and (5) system control circuitry. Claim 1 further stipulates a scanner stand. Claim 2 adds a limitation concerning the manner by which the bar code presence detection means of claim 1 detects the presence of a bar code.

3. United States Patent 5,340,971

United States Patent No. 5,340,971 (the “‘971 patent”) issued from a continuation-in-part application of the ‘421 application and contains additional material in its patent specification.

³ Claims may be independent, dependent, or multiple dependent. An independent claim stands on its own and does not rely on any other claims to define its scope. A dependent claim refers back to an earlier claim and incorporates by reference any limitations (that is, express “boundaries” to the invention) described in that earlier claim. *See Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1553 (Fed. Cir. 1989). To avoid redundancy, the dependent claim must add further limitations over the earlier-referenced claim. *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006). Multiple dependent claims refer back in the alternative to two or more previous claims and include all limitations described in those claims. *Manual of Patent Examining Procedure* § 608.01(n) (8th ed. 2005). *See generally Jeneric/Pentron, Inc. v. Dillon Co.*, No. 3:98-CV-818, 1999 WL 66537, at *9 (D. Conn. 1999) (discussing the difference between dependent and independent claims), *aff’d*, 205 F.3d 1377 (Fed. Cir. 2000).

The '971 patent describes an automatic laser bar code reader having a mode of operation that allows it to read consecutively different bar code symbols automatically. Of the claims in dispute, claim 44 is an independent claim and claim 46 depends from claim 44.

Claim 44 sets forth a bar code reading device with six components, including (1) a housing, (2) a laser beam producing means, (3) a laser beam scanning means, (4) a laser light detecting means, (5) a scan data processing means, and (6) a control means. Claim 46 adds a limitation concerning the manner by which the scan data processing means of claim 44 detects the presence of a bar code.

4. United States Patent 5,925,870

United States Patent No. 5,925,870 (the "'870 patent") originated from a continuation application of two other continuation-in-part applications of U.S. Patent App. No. 07/761,123 (which itself issued as the '971 patent). The '870 patent describes an automatic laser bar code reader that flickers or blinks the reader's laser beam to increase the visibility of the laser scan line. The only claim in dispute from the '870 patent is independent claim 10.

Claim 10 outlines a bar code reader with eight components, including (1) a housing, (2) a system activation means, (3) a laser beam source, (4) a laser beam directing means, (5) a scanning mechanism, (6) a light detection means, (7) a scan data processing means, and (8) a control means.

II. Principles of Law

A. The *Markman* Hearing

There are two steps in a patent infringement analysis. First, the court must determine the

proper construction, or meaning, of the disputed claim or claims. Second, findings must be made as to whether the accused product or method infringes the asserted claim as properly construed. *See Markman*, 517 U.S. at 377-90. Under *Markman*, claim construction is a matter of law to be decided only by the court, whereas the issue of infringement is a question left to the factfinder. *Id.*

A *Markman* hearing may be held before, during, or after discovery, and even, in theory, during the infringement trial or on post-trial motions. *See Elf Atochem N. Am., Inc. v. Libbey-Owens-Ford Co.*, 894 F. Supp. 844, 850 (D. Del. 1995). Although the Federal Circuit has not mandated a time for conducting *Markman* hearings, courts generally hold them before the infringement trial and after the parties have conducted discovery relating to their respective contentions as to claim construction. Within this District, for instance, it is a common practice for courts to conduct *Markman* hearings after discovery is completed. *See, e.g., Conopco, Inc. v. Warner-Lambert Co. (In re Conopco, Inc.)*, No. Civ. A. 99-101, 2000 WL 342872, at *4 (D.N.J. Jan. 26, 2000) (“[C]ourts have held that *Markman* hearings to determine proper claim construction are inappropriate prior to completion of discovery.”); *see also, e.g., ADC Telecomm., Inc. v. Siecor Corp.*, 954 F. Supp. 820, 821, 826-31 (D. Del. 1997); *S.S. White Burs, Inc. v. Neo-Flo, Inc.*, No. Civ. A. 02-3656, 2003 WL 21250553, at *3 (E.D. Pa. May 2, 2003).

A fundamental principle of claim construction is that patent claims must have the same meaning to all persons at all times, and that the meanings of the claims are determined and fixed at the time the Patent and Trademark Office (“PTO”) issued the patent. *See SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1338 (Fed. Cir. 2005) (en banc) (“Claim interpretation requires the court to ascertain the meaning of the claim to one of ordinary skill in the art at the

time of invention.”). The purpose of a *Markman* hearing is for the court and the parties to settle conclusively on the interpretation of disputed claims. *See Elf Atochem*, 894 F. Supp. at 850, 857-58. Indeed, the need for uniformity of claims’ construction and concerns about fairness to competitors inform the policy of reserving the claim-construction function to the trial judge. *See Markman*, 52 F.3d at 987 (“The more appropriate analogy for interpreting patent claims is the statutory interpretation analogy. Statutory interpretation is a matter of law strictly for the court. There can be only one correct interpretation of a statute that applies to all persons.”).

In some instances, claim construction may be dispositive of the entire case because the likelihood of success for one side is greater on the issue of infringement based on the court’s construction. *See Nystrom v. Trex Co.*, 424 F.3d 1136, 1140-41 (Fed. Cir. 2005) (“Based on the district court’s claim construction ruling, Nystrom conceded that he could not prove his infringement case against TREX.”). In those cases, the court’s and the litigants’ resources may be saved by consenting to judgment. Even if the claim construction is not dispositive of the case, it will lay the groundwork for the ensuing infringement trial.

B. General Principles of Claim Construction

In interpreting a disputed claim, the court looks primarily to the intrinsic evidence in the record, “i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (citing *Markman*, 52 F.3d at 979). Intrinsic evidence is the “most significant source of the legally operative meaning of disputed claim language.” *Id.* First, the court must look to the words of the claim itself to define the proper scope of the claimed invention. When interpreting the words of the claim, “a court must presume that the terms in the claim mean what they say, and, unless

otherwise compelled, give full effect to the ordinary and accustomed meaning of claim terms.” *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 989 (Fed. Cir. 1999). However, the court will not accord a claim term its ordinary meaning in two situations. “The first arises if the patentee has chosen to be his or her own lexicographer by clearly setting forth an explicit definition for a claim term. The second is where the term or terms chosen by the patentee so deprive the claim of clarity that there is no means by which the scope of the claim may be ascertained from the language used.” *Id.* at 990 (internal citations omitted). In either situation, the court must adopt the proffered definition of a term. *Id.*

Claims “are part of ‘a fully integrated written instrument,’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc) (citing *Markman*, 52 F.3d at 978), consisting principally of a written description of the invention, 35 U.S.C. § 112 para. 1, often referred to as the specification,⁴ and concluding with the claims, *id.* para. 2. “For that reason, claims ‘must be read in view of the specification, of which they are a part.’” *Phillips*, 415 F.3d at 1315 (quoting *Markman*, 52 F.3d at 979). Thus, the second step in claim construction is for the court “to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning. The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.” *Vitronics*, 90 F.3d at 1582.

Next to the claim language itself, the specification is the most relevant evidence to any construction analysis. “Usually it is dispositive; it is the single best guide to the meaning of a

⁴ As defined by 35 U.S.C. § 112, the specification of a patent is technically the written description of the disclosed invention plus the claims. 35 U.S.C. § 112 para. 2. However, as used widely by courts and practitioners, the term “specification” herein refers only to the written description of the invention, excluding the claims.

disputed term.” *Id.* In addition to defining terms, the specification “teaches about the problems solved by the claimed invention, the way the claimed invention solves those problems, and the prior art that relates to the invention. These teachings provide valuable context for the meaning of the claim language.” *Eastman Kodak Co. v. Goodyear Tire & Rubber Co.*, 114 F.3d 1547, 1554 (Fed. Cir. 1997), *abrogated on other grounds*, *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc); *see also Phillips*, 415 F.3d at 1316 (“In light of the statutory directive that the inventor provide a ‘full’ and ‘exact’ description of the claimed invention, the specification necessarily informs the proper construction of the claims.”); 5A-18 Donald S. Chisum, *Chisum on Patents* § 18.03(2)(c) (2006).

The third step in claim construction entails consideration of a patent’s prosecution history. A patent’s prosecution history consists of “the complete record of all the proceedings before the Patent and Trademark Office, including any express representations made by the applicant regarding the scope of the claims.” *Vitronics*, 90 F.3d at 1582. For example, during the application process, a patent examiner may require the applicant to limit the scope of his or her proposed claims so as not to include prior art within their ambit. An applicant may also limit the scope of his or her proposed claims in the process of distinguishing his or her invention over the prior art in order to obtain a patent. When an applicant surrenders or disclaims subject matter in this manner, the disclaimer becomes part of the prosecution history. If the application ultimately issues as a patent, the patent holder is bound by his or her prior disclaimers. *Spectrum Int’l, Inc. v. Sterilite Corp.*, 164 F.3d 1372, 1378 (Fed. Cir. 1998) (“[E]xplicit statements made by a patent applicant during prosecution to distinguish a claimed invention over prior art may serve to narrow the scope of a claim.”). However, the Federal Circuit has said that “for

prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1325-26 (Fed. Cir. 2003) (footnote omitted).

In the context of multiple continuation or continuation-in-part patents originating from the same parent patent, “the prosecution history regarding a claim limitation in any patent that has issued applies with equal force to subsequently issued patents that contain the same claim limitation.” *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 980 (Fed. Cir. 1999). Thus, a claim in a continuation or a continuation-in-part patent may, in addition to being limited by its own prosecution history, be limited because of (1) the prosecution history of its parent patent, and/or (2) the prosecution history of a continuation or continuation-in-part patent from the same parent patent that has issued prior to the patent in question, so long as the patents contain the same claim limitation.

Although a patent’s prosecution history is relevant in construing the patent claims, there is a distinction between construing the claims in light of their prosecution history and applying the doctrine of prosecution history estoppel.⁵ Courts consult the prosecution history of a patent

⁵ The doctrine of prosecution history estoppel “precludes a patent owner in an infringement suit from obtaining a construction of a claim that would in effect resurrect subject matter surrendered during the course of proceedings in the Patent and Trademark Office.” 5A-18 Chisum, *supra*, § 18.05; *see also Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 564-65 (Fed. Cir. 2000) (en banc) (“The logic of prosecution history estoppel is that the patentee, during prosecution, has created a record that fairly notifies the public that the patentee has surrendered the right to claim particular matter as within the reach of the patent.”), *vacated & remanded on other grounds*, 535 U.S. 722 (2002), *on remand*, 344 F.3d 1359 (Fed. Cir. 2003) (en banc), *cert. denied*, 541 U.S. 988 (2004); *Pharmacia & Upjohn Co. v. Mylan Pharms., Inc.*, 170 F.3d 1373, 1376 (Fed. Cir. 1999) (“Prosecution history estoppel precludes a patentee from obtaining under the doctrine of equivalents coverage of subject matter that has been relinquished during the prosecution of its patent application.”). The actions by the patentee that may give rise to prosecution history estoppel include claim amendments and arguments

during claim construction, while they apply the doctrine of prosecution history estoppel only during trial as a measure of preventing a patentee from improperly benefitting from the doctrine of equivalents.⁶ *Altech Controls Corp. v. E.I.L. Instruments, Inc.*, 71 F. Supp. 2d 677, 680 (S.D. Tex. 1999) (“Prosecution history estoppel imposes a legal limitation on the application of the doctrine of equivalents in excluding from the range of equivalents any subject matter surrendered during the prosecution of the application for the patent”); *see also Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1238 (Fed. Cir. 2001) (“This court has previously stated that the doctrine of prosecution history estoppel is ‘irrelevant’ to the determination of literal claim scope. . . . [W]e recognized a ‘clear line of distinction’ between using prosecution history to construe disputed claim language, and applying the doctrine of prosecution history estoppel” (citing *Biodex Corp. v. Loredan Biomedical, Inc.*, 946 F.2d 850, 862 (Fed. Cir. 1991))). The Federal Circuit has cautioned district courts not to confuse “following the statements in the prosecution history in defining a claim term, [with] the doctrine of prosecution history estoppel, which limits expansion of the protection under the doctrine of equivalents.” *Spectrum*, 164 F.3d at 1378 n.2.

made before the Patent Office. *Festo*, 234 F.3d at 564.

⁶ The doctrine of equivalents “allows a patent owner to hold as an infringement a product or process that does not [fall within] the literal terms of a patent’s claim but performs substantially the same function in substantially the same way to obtain the same result as the claimed subject matter.” 5A-18 Chisum, *supra*, § 18.04 (footnote omitted). The doctrine is a response to the difficulties in capturing an invention with words. For a court only to conduct literal infringement analysis and confine an invention strictly to its written application may, in some instances, be unfair to the inventor. The Supreme Court observed in *Festo* that “the nature of language makes it impossible to capture the essence of a thing in a patent application. . . . [It] may not capture every nuance of the invention or describe with complete precision the range of its novelty.” *Festo*, 535 U.S. at 731.

Lastly, although “[i]n most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term,” a court may rely on extrinsic evidence, such as expert and inventor testimony, dictionaries, and learned treatises, if an analysis of the intrinsic evidence does not give clarity to a disputed claim term. *Vitronics*, 90 F.3d at 1583.

Nevertheless, a court should not rely on extrinsic evidence when the public record unambiguously defines the scope of the claimed invention. “The claims, specification, and file history, rather than extrinsic evidence, constitute the public record . . . on which the public is entitled to rely.” *Id.*

Notwithstanding the disfavored treatment of extrinsic evidence, *Vitronics* instructs that judges may consult technical treatises and dictionaries to gain a better understanding of the underlying technology. *Id.* at 1584 n.6. Judges may even adopt the dictionary definition of terms as long as the definition does not contradict the intrinsic evidence associated with related patent documents. *Id.*

C. Construction of Means-Plus-Function Elements

In addition to the general principles of claim construction, special rules of construction apply to claims that employ so-called means-plus-function language. A means-plus-function claim element describes an invention, or an aspect of an invention, as a general means or step for performing a specifically-defined function. By employing means-plus-function claim language, a patentee may “recite a function to be performed as a claim limitation rather than reciting structure or materials for performing that function.” *Omega Eng’g*, 334 F.3d at 1321. Section 112, paragraph six of Title 35 of the United States Code authorizes the use of means-plus-function terminology in claim drafting.

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C § 112 para. 6.

A court will construe claim limitations written in means-plus-function form by utilizing a two-step approach. The court must first identify the claimed function. *Omega Eng'g*, 334 F.3d at 1321. Ordinary principles of claim construction govern the identification of the claimed function and “[t]he court must construe the function of a means-plus-function limitation to include the limitations contained in the claim language, and only those limitations.” *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 296 F.3d 1106, 1113 (Fed. Cir. 2002). Under general principles of claim construction, there is “a ‘heavy presumption’ that claim terms carry their accustomed meaning in the relevant community at the relevant time,” and this presumption may be overcome only “by clearly using the words in the specification, prosecution history, or both ‘in a manner inconsistent with its ordinary meaning.’” *Genzyme Corp. v. Transkaryotic Therapies, Inc.*, 346 F.3d 1094, 1098 (Fed. Cir. 2003) (quoting *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002), and *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1347 (Fed. Cir. 2003)). Therefore, under general principles of claim construction, the function of a means-plus-function claim is construed according to its “ordinary and accustomed meaning[] unless the patentee demonstrated an intent [in the intrinsic record] to deviate from the ordinary and accustomed meaning of a claim term . . . using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.” *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1324, 1327 (Fed. Cir. 2002).

Once the court identifies the function, it must then determine the corresponding structure or structures in the specification that perform the identified function. *Omega Eng'g*, 334 F.3d at 1321; *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1210 (Fed. Cir. 2003). A structure is corresponding “only if the specification or the prosecution history clearly links or associates that structure to the function recited in the claim.” *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997); *see also Icon Health & Fitness, Inc. v. Sportcraft, Ltd.*, 272 F. Supp. 2d 384, 388 (D.N.J. 2003) (“Claim construction of a means-plus-function element requires identification of the function recited in the claim and identification of the structure corresponding to that function as disclosed in the specification.”). Because a means-plus-function claim by definition may not recite structure, the Court looks first to the language of the specification to identify the corresponding structure. *See B. Braun Med.*, 124 F.3d at 1424; *see also Atmel Corp. v. Info. Storage Devices*, 198 F.3d 1374, 1381 (Fed. Cir. 1999) (“[S]tructure supporting a means-plus-function claim under § 112, ¶ 6 must appear in the specification.”).

If necessary, the Court may also consult the patent’s prosecution history. *See Cybor*, 138 F.3d at 1457 (“Prosecution history is relevant to the construction of a claim written in means-plus-function form.”). Just as a patentee may disavow the scope of his or her claims, in the case of claims involving means-plus-function language, he or she may disclaim a particular structure during prosecution. *See Altiris Inc. v. Symantec Corp.*, 318 F.3d 1363, 1375 (Fed. Cir. 2003); *cf. Ballard Med. Prods. v. Allegiance Healthcare Corp.*, 268 F.3d 1352, 1359 (Fed. Cir. 2001) (“When a patentee advises the examiner . . . that a particular structure is not within his invention, the patentee is not permitted to assert in a subsequent infringement action that the

same structure is equivalent . . . for purposes of section 112 paragraph 6.”); *Cybor*, 138 F.3d at 1457 (“Clear assertions made in support of patentability may thus affect the range of equivalents under § 112, ¶ 6.”). However, “[u]nless altering claim language to escape an examiner rejection, a patent applicant only limits claims during prosecution by clearly disavowing claim coverage.” *York Prods., Inc. v. Cent. Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1575 (Fed. Cir. 1996).

Although employment of means-plus-function language may seemingly grant the drafter all the means capable of performing the recited function, this is not the case. Within the framework for construing a means-plus-function clause, the statute limits a means-plus-function element to cover only “the corresponding structure, material or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112 para. 6; *see also Kahn v. Gen. Motors Corp.*, 135 F.3d 1472, 1476 (Fed. Cir. 1998) (“[I]n writing a claim in means-plus-function form, a party is limited to the corresponding structure disclosed in the specification and its equivalents.”). “The duty of a patentee to clearly link or associate structure with the claimed function is the quid pro quo for allowing the patentee to express the claim in terms of function under section 112, paragraph 6.” *Med. Instrumentation*, 344 F.3d at 1211; *see also Bailey v. Dart Container Corp.*, 157 F. Supp. 2d 110, 115 (D. Mass. 2001) (“[T]he ‘cost’ of using means-plus-function language is that the scope of the claim is restricted to the particular structures disclosed in the specification and their equivalents.”).

III. Construction of the Disputed Claims

A. The ‘698 Patent

The parties dispute the interpretation of several elements in claims 1 and 2 of the ‘698 patent. In claim 1, they dispute the construction of the following elements: the “laser beam

producing means” of limitation 1(a)(2)(i); the “laser light detecting means” of limitation 1(a)(2)(iii); the “bar code symbol detection means” of limitation 1(a)(3); the “symbol decoding means” of limitation 1(a)(4); the “housing support means” of limitation 1(b)(1); and the “base portion” of limitation 1(b)(2).

1. Limitation 1(a)(2)(i)

“a laser beam producing means disposed in said hand-supportable housing for producing and projecting a laser beam through said light transmission aperture”

The Federal Circuit has delineated a framework for allowing courts to recognize when a claim drafter has properly invoked the strictures of 35 U.S.C. § 112 para. 6. *See Al-Site Corp. v. VSI Int’l, Inc.*, 174 F.3d 1308, 1318 (Fed. Cir. 1999). If the word “means” appears in the claim in combination with an intended function, a court will presume that the “means” clause is a means-plus-function element to which § 112, ¶ 6 applies. *Id.* However, the drafter may overcome this presumption by reciting sufficient structure or material for performing the claimed function in the “means” clause, because § 112, ¶ 6 governs only claim elements that do not recite structural or material limitations associated with the identified function. *Id.*

The parties agree that limitation 1(a)(2)(i) is a means-plus-function claim element. This Court has independently reviewed the claim language and concludes that, consistent with the foregoing principles, limitation 1(a)(2)(i) utilizes means-plus-function language. Specifically, the claim element recites the term “means” in connection with a function, thus giving rise to the presumption of a means-plus-function claim element. Furthermore, the claim element does not recite structure for performing the recited function so as to rebut the means-plus-function presumption. Accordingly, the Court will construe limitation 1(a)(2)(i) according to the

principles governing means-plus-function claim elements under § 112, ¶ 6.

Having found that limitation 1(a)(2)(i) is a means-plus-function claim element, the Court conducts a two-step analysis to construe this claim element properly. As mentioned above, the Court must first identify the function recited in the claim element. *Omega Eng'g*, 334 F.3d at 1321. Once the function is ascertained, the Court must determine the structure corresponding to that function as disclosed in the specification. *Id.*

a. Function

The parties appear substantially to agree that the claimed function is “producing and projecting a laser beam through said light transmission aperture.” Although Symbol, unlike Metrologic, fails to set forth expressly its proposed construction of the disclosed function, Symbol appears not to contest Metrologic’s straightforward reliance on the plain language of the claim. Under principles of claim construction for means-plus-function claims, “[t]he court must construe the function of a means-plus-function limitation to include the limitations contained in the claim language, and only those limitations.” *Cardiac Pacemakers*, 296 F.3d at 1113. Here, limitation 1(a)(2)(i) expressly states that the laser beam producing means is for “producing and projecting a laser beam through said light transmission aperture.” Accordingly, the Court finds that the recited function is “producing and projecting a laser beam through said light transmission aperture.”

b. Corresponding Structure

i. Normally-Off Visible Laser Diode

The parties have two disputes concerning the corresponding structure. While they agree that the visible laser diode 36 is a corresponding structure, they vigorously contest whether that

visible laser diode is normally off. Symbol urges the Court to construe limitation 1(a)(2)(i) so as to expressly acknowledge the limitation that the visible laser diode is normally off. According to Symbol, the patentees of the '698 patent distinguished their invention by claiming that the normally-off laser was an improvement over prior art that wasted power by blinking the laser during object detection or powering the laser continuously. *See* '698 Patent col. 2 ll. 10-16, 27-44. Metrologic responds that in distinguishing their own invention over the prior art, the patentees were merely describing one problem that the prior art exhibited when implemented as portable, battery-powered devices. Thus, Metrologic accuses Symbol of seeking to import a limitation from the specification into the claims.

Metrologic is correct that the plain language of limitation 1(a)(2)(i) does not explicitly require a "normally-off" laser. As the Federal Circuit has mandated, however, courts interpreting means-plus-function claims must consult the specification when identifying the structure that corresponds to a given function. *Omega Eng'g*, 334 F.3d at 1321. Here, the specification clearly discloses a normally-off visible laser diode. First, the patentees denigrate the prior art by indicating that prior art devices suffer from "several significant shortcomings and drawbacks," such as requiring the "continuous use of a pulsed laser beam" that "undesirably drains limited power reserves." '698 Patent col. 2 ll. 11, 13, 14-15. The claimed invention purports to "overcome[] the above shortcomings and drawbacks of prior art devices" in part by operating in a "power conserving manner." *Id.* col. 2 ll. 64-65, col. 3 ll 15-16; *see also id.* col. 5 ll. 27-29 (noting that the invention "provides a great degree of versatility in system capability and operation, as well as power conservation"). In conjunction with representations made elsewhere in the specification, these statements suggest that the patentees did not regard the difference

between continuously-on and normally-off lasers as insubstantial. *See Ballard Med. Prods.*, 268 F.3d at 1359 (“Statements detailing the shortcomings of the relevant prior art have often proved useful in construing means-plus-function claims.”); *cf. Vulcan Eng’g Co. v. Fata Aluminum, Inc.*, 278 F.3d 1366, 1374 (Fed. Cir. 2002) (affirming district court’s finding that differences between accused device and corresponding structure described in specification were insubstantial, and thus the devices were equivalent); *cf. also* 35 U.S.C. § 112 para. 6 (extending means-plus-function claim coverage to include structure described in specification “and equivalents thereof”).

Second, a normally-off visible laser diode is the only embodiment of the claimed function that is disclosed in the specification. *See Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1308 (Fed. Cir. 1998) (construing corresponding structure in reference to only disclosed preferred embodiment). The specification discloses that the scanning means includes the visible laser diode, ‘698 Patent col. 7 ll. 17-21, and that this scanning means is initially off, *id.* col. 5, ll. 52-57; col. 11 ll. 46-55. This disclosure finds confirmation in Figure 8A, block A, which indicates that during object detection, only the system activation means is on, while the “remainder of system components are off, i.e. scanning means . . .” *Id.* Fig. 8A.

Third, the “Background” section of the specification indicates that one of the objects of the invention is to “determin[e] the presence of an object without enabling the scanning means of the device.” *Id.* col. 3 ll. 26-29. Another object of the invention is to provide a system in which “a wide number of system control operations can be carried out in a power conserving manner, to permit automatic reading of bar code symbols in a variety of diverse applications.” *Id.* col. 3 ll. 14-17. The “versatility” and “power conservation . . . advantages of this control system

architecture” are reflected in the preferred embodiment. *Id.* col. 5 ll. 28-32. Together, these representations clearly indicate that the structure corresponding to the claimed function is a normally-off visible laser diode. *See Honeywell Int’l, Inc. v. ITT Industries, Inc.*, 452 F.3d 1312, 1320 (Fed. Cir. 2006) (holding that specification’s repeated denigration of a particular embodiment was “the equivalent of a disavowal” of subject matter).

Metrologic contends that when the specification speaks of the shortcomings of prior art devices that drain limited power reserves, it refers specifically to battery-powered devices that are not relevant to the instant dispute. However, the desirability of power conservation is not limited to battery-powered devices. *See* ‘698 Patent col. 3 ll. 14-17 (listing desirability of power conservation without mentioning battery-powered applications). Nor does the patent confine its denigration of continuously-on prior art devices to the problem of power drain. For instance, in discussing the shortcomings inherent in the prior art, the patentees note that “the extensive use of a laser beam to perform object and bar code symbol detection functions implicates [the] necessity for laser emission control measures.” *Id.* col. 2 ll. 43-46. Such statements belie Metrologic’s contention that the patentees’ denigration of continuously-on prior art devices “is not even relevant to the claim at issue.” (Metrologic’s Rebuttal Br. 5.)

Metrologic points to nothing in the patent indicating that battery-powered applications are not relevant to the claimed invention. Moreover, simply because the accused infringing devices are not battery-powered should not affect the Court’s construction of the disputed claims. It is axiomatic that a patent’s claims should have the same meaning to all people at all times. *See Markman*, 52 F.3d at 987. A corollary to this principle is that the meaning of a patent’s claims does not depend on the nature of the alleged infringing device. *See id.* (“[T]he subjective

meaning that a patentee may ascribe to claim language is also not determinative.”). Here, the patent clearly signals the importance of power conservation and laser emission control.

Therefore, these qualities are relevant in this dispute.

Metrologic also argues, in supplemental briefing submitted to this Court, that Symbol’s proposed construction impermissibly adds a functional limitation—“normally off”—in violation of the Federal Circuit’s guidance in *Wenger Manufacturing*, 239 F.3d at 1233. Again, the Court disagrees with this characterization. The adjective “normally-off” modifies the noun “visible laser diode,” which together represent a *structural limitation* on the visible laser diode, not a functional limitation. Construing the corresponding structure as requiring a “normally-off visible laser diode” in no way limits the function of “producing and projecting a laser beam through said light transmission aperture.” Thus, for all of the reason discussed above, it is apparent that an important feature of the visible laser diode in the claimed invention is that it is normally off.

ii. Mirror for Projecting

The parties’ second dispute concerns whether the corresponding structure includes a mirror, and if so, whether the mirror is the “scanning mirror.” Metrologic argues that a mirror is necessary to perform the function of “projecting” the laser beam through the light transmission aperture. Symbol responds that, with respect to limitation 1(a)(2)(ii), which is not in dispute, the parties agree that the claimed “scanning means” includes “a scanning mirror.” Thus, according to Symbol, Metrologic’s insistence that a “mirror” be included in the structure corresponding to the laser beam producing means (limitation 1(a)(2)(i)) indicates that under Metrologic’s proposed constructions, *two* mirrors could perform the functions of projecting and scanning the laser beam. Symbol contends that two mirrors are redundant, and that only one mirror—corresponding to the

agreed-upon scanning mirror of the scanning means (limitation 1(a)(2)(ii))—is necessary to perform the projecting and scanning functions.

There is no dispute that at least one mirror is necessary to perform the function of “projecting” the laser beam through the light transmission aperture. The parties further agree, with respect to limitation 1(a)(2)(ii), that “a scanning mirror” performs the function of “scanning a laser beam across a scan field.” (App. of Exs. to Symbol’s Br., Ex. 8 at 1.) Thus, the Court must determine whether this agreed-upon construction is inconsistent with Metrologic’s proposed construction of limitation 1(a)(2)(i) as including a “mirror” for projecting the laser beam.

A structure is corresponding “only if the specification or the prosecution history clearly links or associates that structure to the function recited in the claim.” *B. Braun Med.*, 124 F.3d at 1424. Clearly, limitation 1(a)(2)(i) describes the function of “projecting.” This function cannot be performed without the aid of a mirror. Thus, the ‘698 patent discloses in its specification that while the visible laser diode 36 is the light source, a mirror is used to deflect the laser beam output from the laser diode. ‘698 Patent col. 7 ll. 17-26. Although Metrologic’s proposed construction of limitation 1(a)(2)(i) refers to a “mirror” in generic terms, Metrologic indicates in its opening brief that this mirror is in fact the scanning mirror of limitation 1(a)(2)(ii). (Metrologic’s Opening Br. at 19 (“... the structure corresponding to the function of ‘projecting’ is the mirror attached to the scanning motor (38).”).) The ‘698 patent shows that item 38 is indeed the scanning mirror. ‘698 Patent col. 7 ll. 26; Fig. 1C. From these facts, the Court concludes that as between limitations 1(a)(2)(i) and 1(a)(2)(ii), there is *one* mirror that performs both the functions of “projecting” the laser beam (limitation 1(a)(2)(i)) and “scanning” it across a

scan field (limitation 1(a)(2)(ii)).

As worded, Metrologic's proposed construction of limitation 1(a)(1)(i) as including a "mirror" is ambiguous and admits of the possibility of two mirrors performing the projecting and scanning functions. Because the parties agree that limitation 1(a)(2)(ii) includes "a scanning mirror," and because there is only one mirror that performs the functions of projecting and scanning, the Court will construe limitation 1(a)(2)(i) to include the additional corresponding structure of a "scanning mirror." In this way, the Court ensures the identity of the mirrors corresponding to limitations 1(a)(2)(i) and 1(a)(2)(ii).

For the foregoing reasons, the Court finds that the structure corresponding to the function described in limitation 1(a)(2)(i) is a normally-off visible laser diode and scanning mirror. The Court shall construe limitation 1(a)(2)(i) as follows: "a normally-off visible laser diode and scanning mirror and their structural equivalents for producing and projecting a laser beam through a light transmission aperture when activated."

2. Limitation 1(a)(2)(iii)

"laser light detecting means for detecting the intensity of laser light reflected off said scanned bar code symbol and passed through said light transmission aperture, and automatically producing scan data indicative of said detected light intensity;"

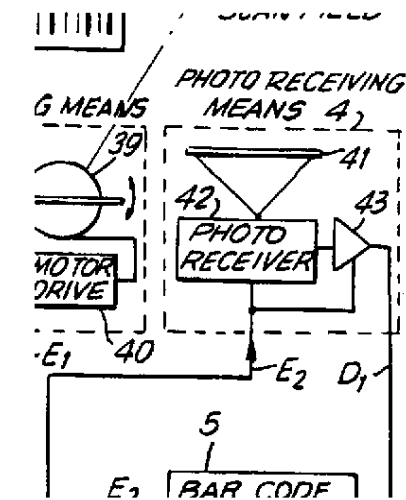
The parties agree that limitation 1(a)(2)(iii) is a means-plus-function claim element. Having independently reviewed the claim language, the Court finds that the language employs the term "means" and does not recite any structure for performing the claimed function. In accordance with Federal Circuit guidance, the Court concludes that limitation 1(a)(2)(iii) is a means-plus-function claim element.

a. Function

Both parties essentially agree that the function recited in limitation 1(a)(2)(iii) is “detecting the intensity of laser light reflected off of a bar code symbol and [] automatically producing scan data indicative of the detected light intensity.” (Metrologic’s Br. 20; *see also* Symbol’s Br. 8 (characterizing the function as “detecting and producing”).) This construction comports with the plain language of the claim. Therefore, the Court finds that the function recited by limitation 1(a)(2)(iii) is “detecting the intensity of laser light reflected off of a bar code symbol and automatically producing scan data indicative of the detected light intensity.”

b. Corresponding Structure

Both parties agree that a photoreceiver is required to carry out the first part of the function of “detecting the intensity of laser light reflected off of a bar code symbol.” The only controversy here is whether an additional preamplifier is needed to perform the function of “automatically producing scan data indicative of the detected light intensity.” Metrologic contends that one is needed. Symbol, by contrast, maintains that the function of “automatically producing scan data indicative of the detected light intensity” can be performed by the photoreceiver alone.



Photoreceiving Means of Figure 2

This dispute essentially centers on the proper meaning of the term “scan data indicative of the detected light intensity.” Because the proper meaning is not apparent from the plain language of the claims, the Court must consult the specification for a definition. *Vitronics*, 90 F.3d at 1582. The specification clearly indicates that upon detecting reflected laser light, the “photo receiving means 4 produces an analog data signal D₁.” ‘698 Patent col. 7 ll. 47-48. Photoreceiving means 4 is defined to include, *inter alia*, a photoreceiver and a preamplifier. *Id.* col. 7 ll. 48-55; Fig. 2. Although the specification teaches that “an analog signal indicative of the intensity of the scan data signal” passes from the photoreceiver to the preamplifier, *id.* col. 7 ll. 52-54, the patent does not define this signal as itself being “scan data.” Rather, the specification teaches only that this unnamed signal is “*indicative of . . . the scan data signal.*” *Id.* (emphasis added).

The significance of this distinction is apparent. As noted above, limitation 1(a)(2)(iii) claims the function of producing “*scan data* indicative of the detected light intensity.” Thus, to perform the given function, it is necessary that a signal properly defined by the patent as “scan data” be produced. The only signal produced by any component of photoreceiving means 4 that the specification expressly defines as “scan data” is “analog scan data signal D₁.” *Id.* col. 7 l. 55. As noted above, this signal is generated by photoreceiving means 4, which includes both the photoreceiver and the preamplifier. It therefore follows that the structure that corresponds to the function of “automatically producing scan data indicative of the detected light intensity” is a photoreceiver working in tandem with a preamplifier.⁷

⁷ As will be discussed below, all three patents-in-suit involve a similar dispute with regard to whether a preamplifier is needed in the laser light detecting means. Since all three patents-in-suit originated from the same parent application and share similar disclosures,

For the above reasons, the Court finds that the corresponding structure is a photoreceiver and a preamplifier. The Court also finds that limitation 1(a)(2)(iii) shall be construed as follows: “a photoreceiver and a preamplifier and their structural equivalents for detecting the intensity of laser light reflected off of a bar code symbol and automatically producing scan data indicative of the detected light intensity.”

3. Limitation 1(a)(3)

“bar code symbol detection means in said hand-supportable housing, for processing produced scan data so as to detect said scanned bar code symbol and automatically generate activation control signal in response to the detection of said scanned bar code symbol;”

The parties agree that limitation 1(a)(3) is a means-plus-function claim element. Having independently reviewed the claim language, the Court finds that the language employs the term “means” and does not recite any structure. Thus, the Court concludes that limitation 1(a)(3) is a means-plus-function claim element.

a. Function

Metrologic suggests that the claim element discloses the functions of (1) “processing produced scan data so as to detect said scanned bar code symbol” and (2) “automatically generat[ing an] activation control signal in response to the detection of said scanned bar code symbol.” (Metrologic’s Br. 21 (alteration in original).) Symbol does not appear to contest this interpretation. The Court notes that Metrologic’s proposed construction converts the verb “generate” into its present participle “generating,” thereby altering the meaning of the claim to

particularly with respect to the laser light detecting means, the Court will accord a consistent construction of the laser light detecting means for all three patents-in-suit. The parties agree on this point. (See Metrologic’s Answers to Supplemental Questions 5; *Markman* Hr’g Tr. 95:18-96:6.)

suggest that the “processing” function serves only to “detect said scanned bar code symbol.” This distorted meaning, however, vanishes from Metrologic’s proposed interpretation of the claim. (*See id.* (“... so as to detect a scanned bar code symbol and automatically generate an activation control signal . . .”).) The Court will adhere to the plain language of the claim, and construe the claimed function as “processing produced scan data so as to detect said scanned bar code symbol and automatically generate an activation control signal in response to the detection of said scanned bar code symbol.”

b. Corresponding Structure

The parties generally agree that the structure corresponding to the above function is represented by block 5 in Figure 2, which in turn represents the structure depicted in Figure 4. They also appear to agree that this structure produces an activation control signal in response to either analog or digital input, and that the activation control signal in turn serves as input to various “control means,” which either start internal timers or perform logical operations. However, the parties disagree as to the precise nature of the structure depicted in Figure 4, and whether this structure may exist separate and apart from the “symbol decoding means” depicted in block 7 of Figure 2. Metrologic contends that Figure 4 is a block functional diagram for determining the presence of a bar code symbol, and that this diagram may be implemented as an electrical circuit that receives analog or digital input. In the case of digital input, Metrologic contends that the electrical circuit may be a programmable microprocessor.

By contrast, Symbol characterizes Figure 4 as depicting a “discrete circuit” that must exist “separate and apart” from the symbol decoding means depicted as block 7 in Figure 2. To support its insistence that the bar code presence detection means 5 and the symbol decoding

means 7 are separate structures, Symbol argues, first, that they are depicted as being separate in the patent's only disclosed embodiment, and second, that Metrologic assured the patent examiner of this separateness when prosecuting the '698 patent's great-grandparent patent, U.S. Patent No. 5,424,525 ("the '525 patent"). Symbol urges this Court to find, therefore, that Metrologic has disclaimed any embodiment in which the bar code presence detection means 5 and the symbol decoding means 7 are not separate.

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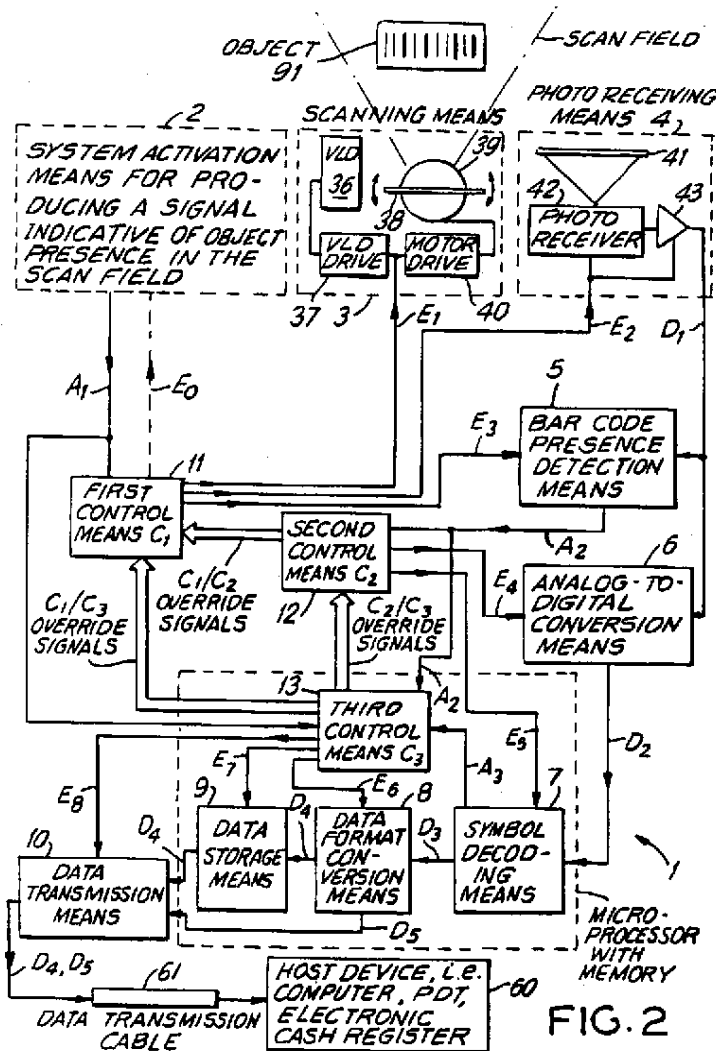


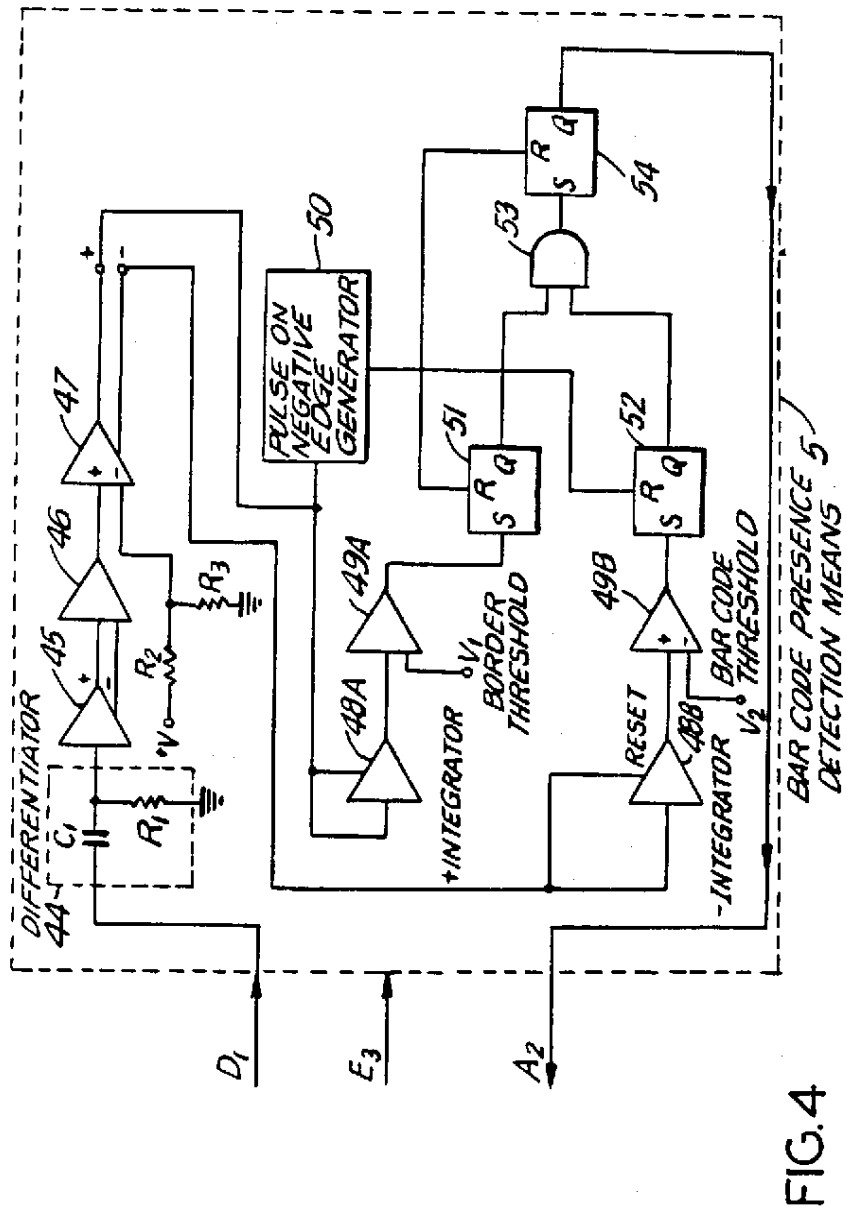
FIG. 2

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Turning first to Figure 4, the Court finds that this pictorial depicts “a block functional diagram of the bar code presence detection means,” ‘698 Patent col. 4 ll. 54-55, and not a “discrete circuit,” as Symbol contends. Nevertheless, the parties appear to agree that this diagram could be implemented as an electrical circuit. The question remains whether such an electrical circuit could further be implemented as a programmable microprocessor, and whether it must exist separate and apart from the symbol decoding means.

With respect to the question whether a programmable microprocessor is a structural equivalent of an electrical circuit, the Court need not decide this dispute at this time. Equivalence in the context of a means-plus-function claim is a question of fact, to be decided by the jury. *Utah Med. Prods., Inc. v. Graphic Controls Corp.*, 350 F.3d 1376, 1383 (Fed. Cir. 2003). Therefore, the Court declines, in construing this claim element, to find that a programmable microprocessor is a structural equivalent to an electrical circuit implementing the block functional diagram of Figure 4.

With respect to Symbol’s contention that the ‘698 patent’s only disclosed embodiment depicts the bar code detection means and the symbol decoding means as separate components, and that this depiction in turn represents a structural limitation on the claimed invention, the Court disagrees. To be sure, Figure 2 does depict the symbol decoding means as residing within a larger, dotted box representing a “microprocessor with memory,” while the bar code presence detection means 5 appears to exist outside of the microprocessor. However, there is no support in the language of the specification for the notion that the bar code presence detection means *must* exist separate and apart from the symbol decoding means, or that important objects of the invention are achieved only through such separateness. The diagram is merely an illustration of

the embodiment disclosed in the specification, and does not represent the limits of the claimed invention. This Court will not import a limitation based solely on its interpretation of a diagram. *See Liquid Dynamics Corp. v. Vaughan Co.*, 355 F.3d 1361, 1369 (Fed. Cir. 2004) (reversing district court for relying on written descriptions of figures to import a limitation into claim); *Johnson Worldwide*, 175 F.3d at 992 (“[M]ere inferences drawn from the description of an embodiment of the invention cannot serve to limit claim terms . . .”).⁸

Perhaps recognizing that the specification provides scant support for its proposed interpretation, Symbol finds refuge in the prosecution history of the ‘525 patent. Specifically, Symbol urges the Court, based on statements Metrologic made during the prosecution of the ‘525 patent, to apply the doctrines of estoppel by argument⁹ and prosecution history estoppel to preclude Metrologic from now seeking a construction in which the programmed microprocessor of the symbol decoding means, *see* ‘698 Pat. Fig. 7A, may be utilized by the bar code presence detection means. As discussed above, the doctrine of prosecution history estoppel is relevant only during the second phase of the patent infringement analysis, i.e., the trial. *See Biodex*, 946 F.2d at 862. It follows that, being a subset of the doctrine of prosecution history estoppel, the doctrine of estoppel by argument is also relevant only during the trial. Therefore, the Court will

⁸ That the patent discloses several embodiments in which the activation control signal generated by the bar code presence detection means 5 is used to turn on the decode microprocessor does not, without more, imply that separate bar code presence detection means and symbol decoding means are a *sine qua non*.

⁹ The Federal Circuit in *Festo* used the doctrine of estoppel by argument to illustrate the circumstances under which the doctrine of prosecution history estoppel would apply. *Festo*, 234 F.3d at 568 (“Arguments made voluntarily during prosecution may give rise to prosecution history estoppel if they evidence a surrender of subject matter.”). Thus, this Court regards the doctrine of estoppel by argument as merely a subset of the doctrine of prosecution history estoppel.

not apply these doctrines at this time. However, recognizing the relevance of a patent's prosecution history during claim construction, the Court will conduct a similar analysis as it would under the doctrine of prosecution history estoppel.

When considering a patent's prosecution history, the prosecution histories of other patents in that patent's family are relevant to the extent that all of the patents share the same disclosure and contain common subject matter. When construing similar claims from a family of patents, prosecution histories of related patents are relevant to claims with the same claim limitations. *See Elkay Mfg.*, 192 F.3d at 980 ("When multiple patents derive from the same initial application, the prosecution history regarding a claim limitation in any patent that has issued applies with equal force to subsequently issued patents that contain the same claim limitation."). Thus, the prosecution history of a claim contained within an ancestor patent will not be relevant to the construction of a claim in a child patent when those claims have differing limitations. By comparison, differences in limitations among independent claims and their dependent claims in a single patent *must* exist under the doctrine of claim differentiation, which "requires each claim be distinct from the others such that the limitations of a dependent claim should not be read into an independent claim." *CleanOX Envtl. Servs., Inc. v. Hudson Envtl. Servs., Inc.*, 14 F. Supp. 2d 601, 616 (D.N.J. 1998).

The relevant claims from the '525 great-grandparent patent are pending claim 69 and pending claim 96, which read as follows:

[Claim 69—]bar code symbol detection means for processing produced scan data, when activated, so as to detect said bar code symbol on said detected object, and automatically generating a second activation control signal in response to the detection of said bar code symbol;

....

[Claim 96—]A bar code symbol detection circuit for processing produced scan data in response to the generation of said first activation signal, so as to detect said bar code symbol on said detected object and automatically generate a second activation signal in response to the detection of said bar code symbol.

(App. of Exs. to Symbol's Br., Ex. 12 at 2, 12.) Symbol cites correspondence between Metrologic and the patent examiner for the '525 patent in which Metrologic represented that the microprocessor used for "bar code symbol reading" need be activated "only when" the device had previously detected a bar code. (*Id.* at 19 (emphasis in original).) Metrologic also distinguished its invention over prior art (U.S. Patent Nos. 4,639,606 ("Boles") and 4,933,538 ("Heiman")), which, according to Metrologic, required their decoding microprocessors to be activated before bar code symbol detection. From these representations, Symbol concludes that Metrologic limited its invention to a device that can detect a bar code symbol while the decoding microprocessor is off, thus implying that bar code symbol detection and decoding cannot be performed by the same microprocessor. Because the '698 patent derives from the '525 patent, and the language of pending claims 69 and 96 are "virtually identical" to the language of claim 1 of the '698 patent, Symbol maintains that the bar code symbol detection means of the '698 patent is subject to the same limitation.

Pending claim 96 of the '525 patent claimed a bar code symbol detection circuit similar to dependent claim 3 of the '698 patent, which claims the bar code symbol detection means of independent claim limitation 1(a)(3) as a bar code detection circuit. Likewise, pending claim 69 of the '525 patent and independent claim limitation 1(a)(3) of the '698 patent both claim similar bar code symbol detection means. Under the doctrine of claim differentiation, independent claim limitation 1(a)(3) must be interpreted to have a broader scope than dependent claim 3. *See*

Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1538 (Fed. Cir. 1991). Thus, the bar code detection means cannot be narrowly construed to refer only to a bar code symbol detection circuit. Analogously, pending claim 96 of the '525 patent, which is similar to dependent claim 3 of the '698 parent, is narrower than independent claim limitation 1(a)(3) of the '698 patent.

In light of the foregoing, the relevant comparison is between pending claim 69 of the '525 patent and independent claim limitation 1(a)(3) of the '698 patent. While these claims appear superficially similar, they present several noteworthy differences. First, pending claim 69 contains a limitation requiring the bar code symbol detection means to be initially activated. (App. of Exs. to Symbol's Br., Ex. 12 at 2 ("... bar code symbol detection means for processing produced scan data, *when activated* . . ." (emphasis added)).) This limitation does not appear in claim limitation 1(a)(3) of the '698 patent. Although it could be argued that the additional requirement of first being activated is implied in claim limitation 1(a)(3), the Court declines to draw such an inference without a clear mandate to do so. The law dictates that a claim should not be narrowed unless the prosecution history evidences a *clear disavowal* of the claim scope. *York Prods.*, 99 F.3d at 1575.

Second, pending claim 69 and limitation 1(a)(3) contain different grammatical usages of the verb "generate." The result, as alluded to above, is to change the claimed function. *Compare* Pending Claim 69 ("bar code symbol detection means for processing . . . and automatically generating . . ."), *with* Limitation 1(a)(3) (means for processing "so as to detect . . . and automatically generate . . ."). In one claim, "processing" is grouped with "generating"; in the other, "detect" is grouped with "generate." Because this Court must maintain faithful adherence to the plain language of the claimed function, *Cardiac Pacemakers*, 296 F.3d at 1113, the Court

must conclude that pending claim 69 and limitation 1(a)(3) have different claim scopes.

Thus, while Symbol advances a compelling argument, the Court ultimately finds that Symbol has failed to demonstrate that Metrologic's allegedly disavowing statements made during prosecution of the '525 patent constitute a clear disavowal of claim scope with respect to the bar code symbol detection means of the subsequently-issued '698 patent. *York Prods.*, 99 F.3d at 1575.

Finally, Symbol urges this Court to construe limitation 1(a)(3) so as to require that the activation control signal is generated when the bar code symbol detection means determines that a bar code symbol *may* be present in the scan field, and not when a bar code symbol definitely *is* present. The Court has examined those portions of the specification to which Symbol has cited and finds little support for Symbol's argument. *A fortiori*, the Court remains unconvinced by the extrinsic evidence that Symbol cites, namely, the deposition testimony of Jay M. Eastman, Metrologic's general technology expert, in which Dr. Eastman opined that it was hypothetically possible for the claimed device to "detect" a partial or incomplete bar code symbol. Ultimately, the Court finds that Metrologic's proposed construction hews more closely to the plain language of the claim and the specification than does Symbol's proposed construction. *See Phillips*, 415 F.3d at 1316 ("The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." (quoting *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998))).

Accordingly, for all of the reasons discussed above, the Court finds that limitation 1(a)(3) shall be construed as follows: "an analog or digital circuit and structural equivalents, for processing produced analog or digital scan data so as to detect a scanned bar code symbol and

automatically generate an activation control signal in response to the detection of said scanned bar code symbol.”

4. Limitation 1(a)(4)

“symbol decoding means in said hand-supportable housing, and responsive to said activation control signal, for processing produced scan data so as to read said detected bar code symbol, and automatically produce symbol character data representative of said read bar code symbol;”

The parties agree that limitation 1(a)(4) is a means-plus-function claim element. Having independently reviewed the claim language, the Court finds that the language employs the term “means” and does not recite any structure. Accordingly, the Court concludes that limitation 1(a)(4) is a means-plus-function claim element.

a. Function

Metrologic suggests that limitation 1(a)(4) discloses the dual functions of “processing produced scan data so as to read the detected bar code symbol” and “automatically producing symbol character data representative of the read bar code symbol.” (Metrologic’s Br. 23.) According to Metrologic, the terms “scan data” and “activation control signal” should mean the same as they do for the bar code detection means, whereas the term “symbol character data” should mean a signal corresponding “to the decoded bar code symbol.” (*Id.* 24 (quoting ‘698 Patent col. 4 ll. 10-11).) Metrologic leaves the term “read” undefined, however, and simply imports that term into its proposed construction. By comparison, Symbol’s proposed construction abandons the term “read” and instead interprets the symbol decoding means as serving to “receive scan data and decode the scan data.” (Symbol’s Br. 12.)

In the background section of the specification, the patentees equate reading with

“recognition.” ‘698 Patent col. 1 ll 18-19 (“The present invention relates generally to automatic bar code symbol reading (i.e. recognition) systems . . .”). While the patent does not explicitly define the term “recognition,” the summary of the invention suggests that reading (i.e., recognition) carries a comparatively broad meaning that encompasses multiple functions of the invention. *See id.* col. 3 ll. 55-58 (“In general, the automatic bar code reading device comprises system activation means, scanning means, photoreceiving means, analog-to-digital conversion means, bar code presence detection means, and symbol decoding means.”). Within limitation 1(a)(4), however, reading appears to be a subset of decoding. *See* ‘698 Patent col. 15 ll. 35-40 (claiming function of the decoding means to be the “processing” of scan data, and claiming “processing” to entail “read[ing]” and “produc[ing]”). This apparent ambiguity and the absence of any clarifying definition in the specification suggest that the term “read” and its variations may have different meanings, depending on their context. Given that Symbol does not explicitly contest Metrologic’s use of the term “read” in its proposed construction, the Court concludes that the precise definition of the term “read” as used in limitation 1(a)(4) does not present a material dispute. Accordingly, the Court will adopt Metrologic’s proposed interpretation of the function performed by the symbol decoding means. The symbol decoding means of limitation 1(a)(4) performs the function of “processing produced scan data so as to read the detected bar code symbol, and automatically produce symbol character data representative of the read bar code symbol.”

b. Corresponding Structure

The parties agree that the corresponding structure for performing the recited function is a programmable microprocessor. (Metrologic’s Br. 24; Symbol’s Br. 12.) However, Symbol urges

the Court to recognize three limitations on this structure. First, Symbol contends that for the reasons discussed in the context of limitation 1(a)(3), Metrologic, when prosecuting the '525 patent, surrendered any interpretation in which the decoding microprocessor was not "separate and apart" from the bar code symbol detection means. Second, Symbol argues that the activation control signal, to which the symbol decoding means is "responsive," must originate from the bar code symbol detection means. Finally, Symbol faults Metrologic for failing to address how the decoding microprocessor is "responsive" to the activation control signal.

The Court rejects Symbol's first argument for precisely the reasons it rejected this argument for limitation 1(a)(3). Specifically, the Court does not find a clear mandate in the claim or specification language for the notion that the bar code presence detection means must exist separate and apart from the symbol decoding means, or that important objects of the invention are achieved only through such separateness. Nor does the Court find within the prosecution history of the '525 patent a clear disavowal of all embodiments in which the bar code presence detection means and the symbol decoding means could be implemented by the same microprocessor. Accordingly, the Court rejects Symbol's proposed limitation that the decoding microprocessor is "not used during bar code detection." (Symbol's Br. 12.)

With respect to Symbol's second argument, Symbol objects to Metrologic's suggestion that the decoding microprocessor is responsive to "*an* activation control signal." (Metrologic's Br. 23 (emphasis added).) Symbol notes that the claim language requires the symbol decoding means to be "*responsive to said* activation control signal" (Symbol's Br. 13 (emphasis in original)), meaning the activation control signal generated by the bar code symbol detection means in response to the detection of a bar code symbol. Symbol is correct. The plain language

of limitation 1(a)(4) states that the symbol decoding means is “responsive to said activation control signal.” ‘698 Patent col. 15 ll. 36-37. “[S]aid activation control signal” clearly refers to the activation control signal generated by the bar code symbol detection means of limitation 1(a)(3) “in response to the detection of said bar code symbol.” *Id.* col. 15 ll. 32-34. Thus, the particular activation control signal in question is the activation control signal that indicates that a bar code symbol is present.

Finally, Symbol urges the Court to define the term “responsive,” as used in limitation 1(a)(4), to mean “turned on in response.” Symbol bases this argument on Metrologic’s only disclosed embodiment, in which Symbol contends that an initially-off decoding microprocessor is turned on in response to the pertinent activation control signal (labeled as A_2). This signal serves as input to a component of the microprocessor known as the third control means, which, according to Metrologic, is always “operating and waiting to receive” signal A_2 . Thus, Metrologic rejects Symbol’s interpretation and maintains that because the third control means is “operating,” the microprocessor is not initially off.

In numerous places, the specification describes an embodiment in which the microprocessor is initially off. For instance, Metrologic discloses a preferred embodiment in which, “[w]hen power switch is initially engaged to its ON position, power will only be provided to system activation means 2 to enable its operation, while, for example, only biasing voltages and the like are provided to all other system components so that they are each initially disabled from operation.” ‘698 Patent col. 5 ll. 52-57. In response to the detection of a bar code in the scan field, activation control signal A_2 “activates second control activation means 12, which, in turn, directly enables A/D conversion means 6 and *symbol decoding means 7.*” *Id.* col. 9 ll. 26-

28 (emphasis added). Likewise, Metrologic discloses that when the preferred embodiment is turned on and the system activation means enabled (i.e., turned on), “the remainder of the systems components (i.e., scanning means 3, photoreceiving means 4, A/D conversion means 6, bar code detection means 5, *symbol decoding means* 7, data format conversion means 8, data storage means 9 and data transmission means 10), [are] disabled (i.e., OFF).” *Id.* col. 11 ll. 50-54 (emphasis added); *see also id.* col. 13 ll. 13-17 (“[W]hen bar code symbol reading device is turned ON, only system activation means 2 is operative and all other system components are inoperative.”). The symbol decoding means 7 is enabled in response to signal A₂. *Id.* col. 11 l. 64-col. 12 l. 2. Figure 8A also clearly indicates that initially, “system activation means is **on** [and] remainder of system components are **off**, i.e. scanning means, photoreceiving means, A/D conversion means, barcode detection means, *symbol decoding means*, data format conversion and transmission means are **off**.” *Id.* Fig. 8A (bold in original; italics added).

In the face of these repeated statements to the contrary, the Court finds no support for Metrologic’s assertion that the third control means is always “operating.” (Metrologic’s Br. 14.) The only citation to the specification that Metrologic provides for this proposition simply describes how the third control means operates after it has been enabled. *See* ‘698 Patent col. 12 l. 49-col. 13 l. 4 (describing operations occurring after block G of Figure 8B, where symbol decoding means 7 has previously been enabled at block E of Systems-Control Operation No. 1, depicted in Figure 8A). Elsewhere in the specification, Metrologic discloses that all system components other than system activation means initially receive only “biasing voltages and the like” and are therefore “each initially disabled from operation.” *Id.* col. 5 ll. 55-57. Thus, even if the third control means is always “operating and waiting” under the influence of a biasing

voltage, the specification clearly indicates that the third control means is still “disabled from operation.” *Id.*

As noted in the discussion of the laser beam producing means, one of the stated objects of this invention is power conservation. The specification makes clear that this object is served not only by employing an initially-off visible laser diode, but also by utilizing a system architecture in which “one or more of the control centers are capable of overriding certain of the other control centers so that a wide number of system-control operations can be carried out in a power conserving manner, to permit automatic reading of bar code symbols in a variety of diverse applications.” *Id.* col. 3 ll. 12-17. This programmable control system “provides a great degree of versatility in system capability and operation, as well as power conservation.” *Id.* col. 5 ll. 28-29. In light of this stated objective, the Court finds that the disclosure of an initially-off microprocessor is not merely one possible embodiment, but an embodiment that serves an important objective of the invention. *See Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1380 (Fed. Cir. 2001) (“The summary and objects of the invention . . . must be read, if possible, in a manner consistent with the rest of the written description.”).

In summary, the specification clearly and unambiguously teaches, in its only disclosed embodiment, that the decoding microprocessor is initially off. This feature of the invention serves the important objective of power conservation. Because claims “must be read in view of the specification, of which they are a part,” the Court will construe the symbol decoding means of limitation 1(a)(4) to reflect the patentees’ clearly-expressed intention of an initially-off microprocessor. *Markman*, 52 F.3d at 979; *see also Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1370 (Fed. Cir. 2003) (“[W]here the specification makes clear at various points that the

claimed invention is narrower than the claim language might imply, it is entirely permissible and proper to limit the claims.”); *Bailey*, 157 F. Supp. 2d at 115 (“[T]he ‘cost’ of using means-plus-function language is that the scope of the claim is restricted to the particular structures disclosed in the specification and their equivalents.”).

For the reasons discussed, the Court construes the symbol decoding means of limitation 1(a)(4) as follows: “a programmable microprocessor and structural equivalents and which is turned on in response to an activation control signal indicating that a bar code symbol is present, for processing produced scan data so as to read the detected bar code symbol, and automatically produce symbol character data representative of the read bar code symbol.”

5. Limitation 1(b)(1)

*“(b) a scanner stand including
(1) housing support means for receiving and supporting at least a portion of said hand-supportable housing”*

The parties agree that limitation 1(b)(1) is a means-plus-function claim element. This independent claim limitation employs the term “means,” which creates the presumption of a means-plus-function claim. Furthermore, as used in this context, the term “housing support” serves as an adjective and does not recite structure. Hence, the Court concludes that limitation 1(b)(1) is a means-plus-function claim element.

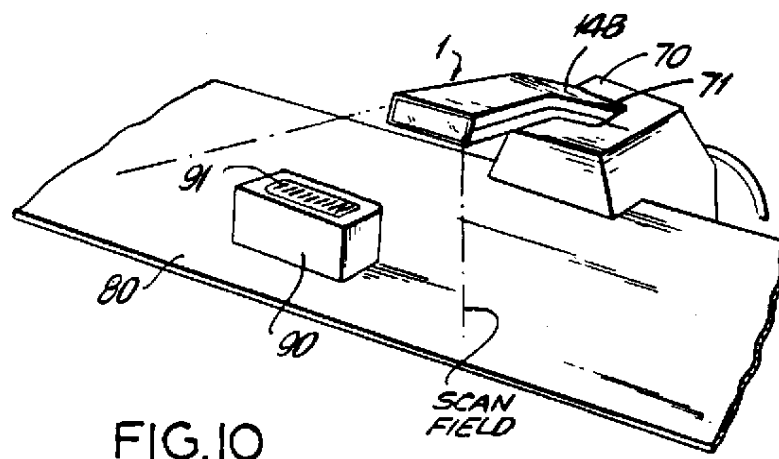
a. Function

The parties do not genuinely dispute the interpretation of limitation (b), but do disagree as to the proper interpretation of sub-limitation (b)(1). Adhering closely to the plain language of the claim, Metrologic suggests that the function is “receiving and supporting at least a portion of the hand-supportable housing.” Symbol re-casts the function as “receiving the handle of the reader.”

Symbol's proposed interpretation is clearly wrong, as the claim language requires only that the housing support means receive and support "at least a portion" of the housing, and not "the handle of the reader." Because "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction," *Phillips*, 415 F.3d at 1316, the Court finds that the function recited by limitation 1(b)(1) is "receiving and supporting at least a portion of the hand-supportable housing."

b. Corresponding Structure

The parties' chief dispute concerns the corresponding structure. Metrologic contends that the corresponding structure is "a support structure," an example of which is the support stand shown in Figure 10 of the '698 patent. In that embodiment, the support stand contains a receptacle for holding the hand-held scanner device, and a person of ordinary skill in the art would understand that the support stand would support the hand-held scanner device so as to permit it to project its scan field over a portion of the countertop. (Metrologic's Br. 24.)



Symbol contends that the only structure disclosed in the patent is the receptacle 71, depicted in Figure 10, which (1) receives the handle of the hand-held scanner device and (2) prevents the laser beam from being downwardly directed. (Symbol's Br. 14.) These additional limitations, Symbol argues, flow from representations that Metrologic made during the prosecution of the '698 patent's grandparent patent, U.S. Patent No. 5,591,953 (the '953 patent). During that prosecution, Metrologic purportedly distinguished over downwardly-pointing prior art stands when it represented that its invention entailed a scan field that "is projected away from the scanner support stand and the hand-supportable housing, and extends above the countertop surface." (App. of Exs. to Symbol's Br., Ex. 15 at 8 (underline in original).) Metrologic also referred to an "outwardly projected scan field" (*id.*), and represented that "said scan field is projected away from said scanner support stand and said hand-supportable housing, and extends above said countertop surface permitting the automatic reading of bar code symbols on objects passed by said scanner support stand" (*id.* at 3-4).

The Court first consults the claim language and specification. *Vitronics*, 90 F.3d at 1582. Limitation 1(b)(1) clearly states that the housing support means serves the function of receiving "at least a portion" of the hand-held scanner device. '698 Patent col. 15 l. 52. Symbol simply ignores this language in arguing that the receptacle may receive only the handle of the hand-held scanner device. This Court must "give full effect to the ordinary and accustomed meaning of claim terms." *Johnson Worldwide*, 175 F.3d at 989. Although Symbol is correct that the preferred embodiment depicted in Figure 10 and described in column 14 of the specification discloses a receptacle 71 that receives the handle of a hand-held scanner device, '698 Patent col. 14 ll. 51-52; Fig. 10, the Court may not import limitations from the preferred embodiment that

are contradicted by the language of the claims. *JVW Enters., Inc. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1335 (Fed. Cir. 2005). Nor is this a case where Metrologic, through repeated statements in the specification, has clearly signaled that “the claimed invention is narrower than the claim language might imply,” *Alloc*, 342 F.3d at 1370, or that “the patentee . . . intends for the claims and the embodiments in the specification to be strictly coextensive,” *JVW Enters.*, 424 F.3d at 1335 (quoting *Phillips*, 415 F.3d at 1323). Therefore, in the face of clear language in the patent itself refuting Symbol’s proposed handle limitation, the Court need not consult the prosecution history of the ‘953 patent. See *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186 (Fed. Cir. 1998) (advising courts to consult prosecution history “if relevant”); *Vitronics*, 90 F.3d at 1582 (noting that court “may” consider prosecution history); *Markman*, 52 F.3d at 980 (explaining that prosecution history may not be used to “enlarge, diminish, or vary the limitations in the claims” (internal quotation marks omitted)). The claimed housing support means shall not be limited to receiving only the handle of the hand-supportable housing.

With respect to Symbol’s proposed limitation on downwardly-directed laser beams, the Court finds no basis in the claim or specification for concluding that the laser beam may or may not be downwardly-directed. The specification discloses an embodiment in which the receptacle 71 receives the housing handle portion of the hand-held scanner device so as to cast the scan field “over a counter top.” ‘698 Patent col. 14 l. 53-54. This language, in the Court’s view, does not suggest that the laser beam may not be downwardly-directed.¹⁰ Moreover, both parties cite to

¹⁰ For instance, the expression “the sun shines over the land” illustrates how the term “over” can be used to indicate an action that is downwardly-directed. See *Webster’s Third New International Dictionary* 1605 (1993) (defining “over” to mean “4a(1): upon or down upon so as to rest, cover, or conceal from view”; “4a(2): upon or down upon so as to change or otherwise influence in a pervasive manner”); see also *Webster’s Ninth New Collegiate Dictionary* 839

Figure 10 in support of their competing constructions (*see* Metrologic's Rebuttal Br. 16-17; Symbol's Br. 14-15), thus making evident the ambiguity of that graphic. Even if Figure 10 were not ambiguous, the Court may not limit claim terms based on inferences drawn from a disclosed embodiment. *See Johnson Worldwide*, 175 F.3d at 992.

The statements that Symbol identifies in the prosecution history of '953 grandparent patent are similarly ambiguous and do not evince a clear disavowal of a downwardly-directed laser beam. *See York Prods.*, 99 F.3d at 1575. Metrologic's representations to the patent examiner that the scan field "is projected away from said scanner support stand and said hand-supportable housing" (App. of Exs. to Symbol's Br., Ex. 15 at 3-4), and "extends above the countertop surface" (*id.* at 8), simply do not foreclose a downwardly-angled laser beam. As such, they do not represent a "clear and unmistakable" disavowal of claim scope. *Omega Eng'g*, 334 F.3d at 1325-26.

For the above reasons, the Court finds that the corresponding structure is a support structure. The Court also finds that limitation 1(b)(1) shall be construed as "a support structure for receiving and supporting at least a portion of the hand-supportable housing."

6. Limitation 1(b)(2)

"a base portion mountable relative to a countertop surface so that when said hand-supportable housing is supported within said housing support means during said stand-supported mode of automatic operation, said scan field is projected away from said scanner support stand and said hand-supportable housing, and extends above said countertop surface permitting the automatic reading of bar code symbols on objects passed by said scanner support stand"

(1991) (defining "over" as "4a – used as a function word to indicate position upon or movement down upon <laid a blanket ~ the child> <hit him ~ the head>").